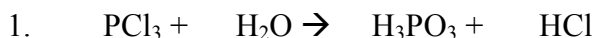


Name: _____ Period _____ Even/Odd

Limiting Reagent and Percent Yield Worksheet

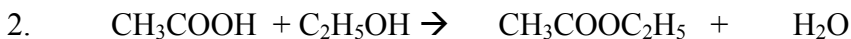
Make sure chemical equations are BALANCED before you begin to work!



Identify the limiting reagent and the theoretical yield of phosphorous acid if:

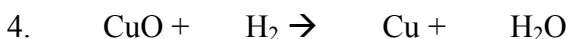
a. 225 g of PCl_3 is mixed with 123 g of water

b. 1.00 mol of PCl_3 is mixed with 50.0 g of water



Identify the limiting reagent and the percent yield if 25.5g CH_3COOH reacts with 11.5 g $\text{C}_2\text{H}_5\text{OH}$ to give a yield of 17.6 g $\text{CH}_3\text{COOC}_2\text{H}_5$.

3. 16.1 grams of Bromine gas are mixed with 8.42 g of chlorine gas to give an actual yield of 21.1 g of bromine monochloride. Write and balance the chemical equation and determine the limiting reagent and the percent yield.

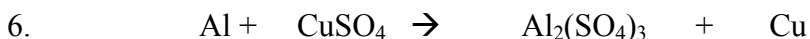


a. What is the limiting reagent when 19.9 g of CuO reacts with 2.02 g of H_2 ? How much excess reagent is left over (in grams)?

b. The actual yield of copper was 15.0 g. What is the percent yield?

c. How many grams of Cu can be collected if 20.6 g of CuO react with an excess of hydrogen if there is a yield of 91 %?

5. A chemist reacts 8.85g of iron with an excess of hydrogen chloride to form hydrogen gas and iron (II) chloride. Calculate the theoretical yield and the percent yield of hydrogen if .27 g of H_2 is collected in the lab. (Hint: first you must write and balance the equation)!



a. If 1.85 g of Al reacts with an excess of copper (II) sulfate and the percent yield of Cu is 56.6 %, what mass of Cu is produced?

b. If you have 2.43 g of copper II sulfate to start with, is Al still the limiting reagent?

c. How much of the excess reagent would be left in grams?